Fraser TSA

Species At Risk (SAR) Database Version 2.7

Training and User's Manual 2008-09

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SAR Database Training Manual
For the Fraser TSA

For application of Version 2.7

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1.0 Introduction

The Species at Risk (SAR) Database is a site-series based management tool developed specifically for the Biogeoclimatic Ecosystem Classification (BEC) variants within a particular Timber Supply Area (TSA). The key functions of the database are

1) to alert forest planners and operators of the potential locations of Species at Risk (SAR) within specific BEC variants, within a TSA of interest, and
2) to provide habitat management guides specific to that particular variant within the selected TSA.

The potential occurrence of a SAR within a particular variant is established through the identification of that species' habitat capability (terrain) and suitability (forest cover or grassland characteristics, depending on the species). If the unique suite of requisite features are present, the management tool provides the user with a set of cover features that should be retained and how (partial cut vs clearcut with reserves, WTP or reserve design, access development, etc). The SAR database is designed to facilitate habitat management for SAR at the cutblock level; landscape planning is not addressed, although the database could be a facilitating component to a landscape planning process.

SAR included in the database in 2008-09 were those specified by the Federal government Species At Risk Act (SARA) Schedule 1, as well as the Provincial government's Identified Wildlife Management Strategy (IWMS 2004) and Section 7 Notices, under the provincial legislation, Forest and Range Practices Act (FRPA).

The database has been structured so that it can provide both detailed information for office use and summarized information in the form of a field card. The processes of accessing the detailed information and printing field cards has been automated by programming the SAR database into a user-friendly model in MS Access.

1.1 Background and Rationale

The final piece of federal legislation regarding species at risk was passed in 2004. The federal Species At Risk Act (SARA) requires provincial governments to provide the mechanism to manage Schedule 1 listed species at risk. The British Columbia provincial government's response to the federal legislation was to improve the existing Identified Wildlife Management Strategy; the upgrade was released June 1, 2004 and is referred to as IWMS 2004 and is a policy document. Since the release of IWMS 2004, Section 7 Notices for specific Schedule 1 SAR have been released by the provincial government under the Forest and Range Protection Act (FRPA). Section 7 Notices provide the management framework for each Forest District for a particular SAR within a landscape context; each SAR listed has a quota for impact to the Timber Harvest Land Base (THLB) as well as number of Wildlife Habitat Areas (WHA) where essentially little or no timber harvest activity is permitted.

2.0 Fraser TSA BEC Variants

The SAR database was completed for the Biogeoclimatic Ecosystem Classification (BEC) variants that occur within the Fraser TSA. Table 1 lists the BEC variants incorporated into the Fraser TSA SAR Database.

Table 1. BEC variants in the Fraser TSA and applied to the SAR database.

CDFmm	CWH dm	ESSFdc 2	IDFdk2	MH mm 1	MS dm2
	CWHds1	ESSFmw	IDFww	MH mm 2	
	CWHms1				
	CWHvm 1				
	CWHvm 2				
	CWHxm 1				

3.0 Fraser TSA Species at Risk

Table 2 lists the species that were included in the 2008-09 SAR database version for the Fraser TSA.

American Avocet	Marbled Murrelet	Southern Red-backed Vole, *occidentalis* subspecies
American Bittern	Mountain Beaver, *rainieri*	Spotted Owl
Bandtailed Pigeon	Mountain Beaver, *rufa*	Townsends Big-eared Bat
Barn Swallow	Olive-sided Flycatcher	Townsends Mole
Burrowing Owl	Olympic Shrew	Trowbridge's Shrew
Coastal Tailed Frog	Oregon Spotted Frog	Western Bluebird (Georgia Depression population)
Double-crested Cormorant	Pacific Giant Salamander	Western Grebe
Fisher	Pacific Watershrew	Western Meadowlark, (Georgia Depression population)
Gopher Snake, *catenifer* subspecies	Peregrine Falcon, *anatum* subspecies	Western Painted Turtle - Pacific Coast Population
Great Blue Heron, *fannini* subspecies	Pine Grosbeak, *carlottae* subspecies	Western Screech Owl, *kennicottii* subspecies
Green Heron	Purple Martin	Western Small-footed Myotis
		Williamson's Sapsucker, *thyroideus* subspecies
Grizzly Bear	Red-legged Frog	Wolverine, *luscus* subspecies
Horned Lark, *strigata* subspecies	Sandhill Crane	Wolverine, *vancouverensis* subspecies
Keen's Myotis	Short-eared Owl	Yellow-billed Cuckoo

Lewis's Woodpecker (Georgia Depression population)	Snowshoe Hare, *washingtonii* subspecies	Yellow-breasted Chat

3.1 SAR Database Species Characteristics

The SAR database is best applied to wildlife species with habitat requirements at the cutblock level, rather than larger ranging species whose life requisites depend on a landscape scale.

All SAR should still be considered at the landscape level to ensure population sustainability through dispersal, since the SAR database does not address features at this scale and only provides guides for the cutblock level.

4.0 SAR Database Function

4.1 Key Objectives for the SAR database

- Biogeoclamatic (BEC variant) unit as the key search entity
- Identification of Wildlife Habitat Areas (WHA's)
- Field card extraction on search result
- Digital image link capability ('built in', not yet available)

4.2 Database Structure

Table 3 shows the database structure, including each field and its definition. The SAR database is BEC variant-based, so that all queries depend on selecting a BEC variant within a particular TSA, not a SAR, although other queries are possible, if desired.

Database Mode: Office/Field Card	Database Section	Variable (Database Field)	Variable Definition
Office	at Risk General Informa	Species at Risk	English and Latin names for a species that has at the very least been provincially Blue-listed, and may also be listed in Schedule 1 under SARA, and may also occur in IWMS 2004.

		Provincial Status	Provincial rank of either Blue or Red-listed. Blue-listed species are not immediately threatened, but of concern due to characteristics that make them particularly sensitive to human activities or natural events (MSRM 2002). Red-listed species have been legally designated as Endangered or Threatened under the Wildlife Act, are extirpated, or are candidates for such designation (MSRM 2002).
		TSA	Timber Supply Area. As of 31 March 2006 the database includes SAR for Fraser, Lillooet, Merritt, and Okangan TSAs.
		BEC Unit	Biogeoclimatic Ecosystem Classification Unit. Wherever possible, the variant was applied; the subzone is the broadest unit permitted. The 'un'-designated subzone refers to an undifferentiated subzone (D. Lloyd pers. comm.).
		Likelihood of Occurrence in BEC Unit	Risk of a particular SAR occurring in a particular BEC variant was assessed as follows; 1. Low – rare species may be classed as such; or less than about 25% chance of occurrence if suitable habitat features are present. 2. Low-moderate – less than 50-50, >25%. 3. Moderate – generally a 50-50 chance of occurrence if suitable habitat features are present. 4. moderate-high – better than 5050, up to about 75% chance of occurrence if suitable habitat features are present. 5. high - >75%, or good chance of occurrence if suitable habitat features are present. Risk assessment was based directly on IWMS 2004 documentation where possible, expert opinion, or in some rare cases estimated based on information available and author experience; peer review was sought in latter situations.
		WHA Location	Wildlife Habitat Area Location as designated by Ministry of Environment.
		WHA Status	Status of Wildlife Habitat Area Locations as either proposed or confirmed as per quotas for WHA noted in Section 7 Notices for each Forest District. Where possible or necessary, status was confirmed with the relevant Species at Risk Biologist (J Surgenor for Fraser, Merritt, and Lillooet TSAs; O. Dyer for Okanagan TSA).
		SAR Locations	Records of species locations requested from and provided by Conservation Data Centre (CDC).

		SAR Specialist Contact	Name of the biologist who is recognized as a particular species expert as a result of their research and other work associated with that species. The name is intended to provide a contact should specific consultation become necessary.
Field Card (Feature Identifiers)	**Habitat Capability**	Site series (talus, rock outcrop, xeric, sub-xeric, mesic, sub-hygric, hygric)	Qualitative soil moisture regime classification rather than quantitative numeric value assigned for the range of soil moisture characteristics defined for each variant within the Biogeoclimatic Ecosystem Classification System.
Office		Elevation range min (m)	Minimum elevation in meters a SAR is expected/has been documented to occur at.
		Elevation range max (m)	Maxmimum elevation in meters a SAR is expected/has been documented to occur at.
Field Card (Feature Identifiers)		Critical aspect 1	Any aspect that may have high capability or is absolutely required by a particular SAR is defined as South (S), South-East (SE), South-West (SW), West (W), East (E), North (N), North-East (NE), North-West (NW).
		Critical aspect 2	As above, although an aspect of secondary importance
		Slope range	Where possible, a quantitative value of the range of slope a SAR either requires, prefers, or will tolerate was provided; for most SAR, such detailed information is often not yet available.
		Key microsite topo features (define: ridge, bench, cliff, valley bottom, mid-slope, etc)	Key micro-site topographic features required or preferred by a particular SAR, where available.
	Habitat Suitability	Structural stage (PEM variable; Ref: Standard for Terrestrial Ecosystem Mapping)	Predictive Ecosystem Mapping (PEM) variable of classified stages (1-7) of forest structure defined by both age and stand structure. The reference is *Standard for Terrestrial Ecosystem Mapping.* A copy of the table can be found in Appendix 1.
		Structural stage modifier (PEM variable; Ref: Standard for Terrestrial Ecosystem Mapping)	As above, this variable further describes stand structure, specifically canopy layer. Definitions are included in the table in Appendix 1.
		Vet Component	Yes or No entry defines whether a veteran tree component is necessary for a particular species habitat in a particular variant.
		Age Class	Forest Cover Inventory Age Class required by a particular species in a stand within a particular variant.

		Lead Species	Forest Cover Inventory Lead Species required by a particular species in a stand within a particular variant.
		Co-dominant Species	Forest Cover Inventory Co-dominant Species required by a particular species in a stand within a particular variant.
		Sub-dominant Species	Forest Cover Inventory Sub-dominant Species required by a particular species in a stand within a particular variant.
		Crown Closure	Forest Cover Inventory Percent Crown Closure required by a particular species in a stand within a particular variant.
Office	**Detailed Species Biology**	Home Range Size	Home range area in hectares for a particular species within a particular variant if available in IWMS 2004
		Movement/Dispersal	The amount of area (ha) or distance (m) a species can be expected to move within a particular variant, where information is available; movement typically refers to dispersal from its original nest or birth/rearing site, but can also refer to intra or inter-seasonal movements.
		Habitat Features - Security	One of three critical life requisites: habitat required by a particular species within a particular variant to remain concealed from its predators and/or competitors.
		Habitat features - nesting/breeding	One of three critical life requisites: habitat required by a particular species within a particular variant for breeding and/or nesting.
		Habitat features - foraging	One of three critical life requisites: habitat required by a particular species within a particular variant for either hunting prey and/or browsing vegetation.
		Habitat Threats	Specific impacts and their causes that threaten habitat feature(s) necessary for one of the three critical life requisites (foraging, security, breeding) of a particular species within a particular variant.
		Disturbance Threats	Specific impacts and their causes that disturb, interrupt, or terminate the activities of one of the three life requisites (foraging, security, breeding) of a particular species within a particular variant.
		GWM (General Wildlife Measures)-Access	General Wildlife Measures defined in IWMS regarding access (road construction, traffic, etc) either immediately outside a WHA boundary or within a buffer where limited management activity is permitted.

		GWM-Havesting and silviculture	General Wildlife Measures defined in IWMS regarding harvesting and silviculture either immediately outside a WHA boundary or within a buffer where limited management activity is permitted.
		GWM-Pesticides	General Wildlife Measures defined in IWMS regarding pesticide use either immediately outside a WHA boundary or within a buffer where limited management activity is permitted.
		GWM-Range	General Wildlife Measures defined in IWMS regarding livestock activity either immediately outside a WHA boundary or within a buffer where limited management activity is permitted.
		GWM-Recreation	General Wildlife Measures defined in IWMS regarding recreation activity either immediately outside a WHA boundary or within a buffer where limited management activity is permitted.
Field Card (Retention)	**Management Guide**	Additional Management Considerations	Any additional information regarding habitat needs or necessary management that cannot be addressed by any other database variable (field); sometimes a more detailed explanation to facilitate understanding of field entries for a particular species within a particular variant.
		Clear cut or partial cut	The 'best' harvest option has been selected based on available information for a particular species within a particular variant; either a clear cut with wildlife tree patches (WTP) and/or reserves will be defined as best as possible with the information available, or a partial cut that will be defined as single tree or patch retention, and/or with opening size defined where possible.
		Wildlife Tree Class (Ref: Biodiversity Guidebook)	Wildlife Tree Classes (1-9) as defined in Appendix 6 of the Biodiversity Guidebook that are required for retention to meet the life requisite habitat needs of a particular species within a particular variant.
		Single tree retention species	Preferred species to be retained during block layout within a particular variant based on/estimated from habitat features necessary for a particular species' life requisites.
		Single tree retention size [DBH limit or range in cm]	Preferred diameter size (cm) of single trees that should be retained during block layout within a particular variant based on/estimated from habitat features necessary for a particular species' life requisites.

		Buffer area around single tree (radius in meters) or stream (m or ha)	The radius (m), or distance from the single tree selected for retention and the outer limit of its buffer to ensure windfirmness and/or provide security for a particular species within a particular variant; if riparian, the width of the riparian forest adjacent to the water's edge that should be retained in a particular variant.
		Patch retention size (ha) (ie: WTP or retention area of some sort)	The size (ha) of the reserved forested area within a cutblock within a particular variant, pending available information for a particular species to meet the habitat needs of its life requisites. Where information was insufficient, a size range or lower area limit for Wildlife Tree Patches (WTPs) or other reserves is estimated.
		Stand structure for retention	A brief, simple description, based on available information, of the forest structure expected to be retained within a particular variant based on/estimated from habitat features necessary for a particular species' life requisites.
		Stand density for retention	A standardized, brief description of stand density expected to be retained in a forest reserve, WTP, etc, within a particular variant, based on/estimated from habitat features necessary for a particular species' life requisites.
		Key stand features for retention	Any specific stand feature that should be retained, not already defined by existing database fields, that is needed for one of the three life requisites of a particular species within a particular variant.
		Patch species retention	If a patch of trees, rather than a single tree, has been selected as the best estimated means to retain life requisite habitat features of a particular species, this would be that species' preferred tree species within a particular variant.
Office	**References**	Reference(s) Cited	For most species entered into the database, Identified Wildlife Management Strategy (IWMS) 2004 provided the most recent species accounts and management criteria that were used. Other articles, sources of information are listed here were relevant.

4.3 SAR Locations and Risk Assessment in the Fraser TSA

CDC records are often masked for security and are not necessarily current for all species. Therefore, in most cases a risk assessment was required to determine the likelihood of a SAR presence within a particular variant based on the criteria shown in Table 3. In the office mode, the database provides a likelihood assessment of presence.

4.4 Generating Field Cards

A Field Card can be generated for a particular BEC variant as part of the navigation results. A print function will generate a formatted Field Card Report from the result of the navigation/search (BEC variant within a particular TSA).

4.5 Database Deployment

The SAR database application has been developed as a standalone read only application, that for this fiscal year will be distributed either by CD or downloaded from an FTP site. It must be installed on the hard drive of the computer it will be used on, and the current version requires MS Access to be present on that computer.

4.6 Database Upgrades

The SAR database will display the date of most recent upgrade. Nearing the anniversary date of the last update (30 days), an exception window will be displayed as a reminder to upgrade the SAR database. The following message will appear:

> Information in this database is continually being researched and updated.
> The current SAR database source date is {database date}.
> Please Contact Astrid van Woudenberg to request a SAR database update.

5.0 Due Diligence: Forest Professional Observations of SAR

If a Species at Risk is observed in the field, it should be reported to the Conservation Data Centre. A standardized form for observations is available on CDC web site (http://www.env.gov.bc.ca/cdc/contribute.html).

If field guides are to be used to identify SAR in a site, they should not be used in isolation, unless identification is made by a qualified professional biologist. Rather, field guides can be used in conjunction with the database. Guides typically indicate broad habitat types and seasonal periods a species can be expected to be observed in. The SAR database will provide detailed critical habitat features that can be identified in the field to facilitate SAR identification. As well, government should be called upon to address information gaps where distribution and range of SAR occur.

5.1 Government Contacts and Websites

Government contacts responsible for SAR in the Fraser TSA are:

IWMS Regional Contacts

Greg George
10470 - 152nd St.
Surrey BC V3R 0Y3
Phone: 604-582-5212
Fax: 604-930-7119
e-mail: greg.george@gov.bc.ca

Important government websites:

Conservation Data Centre
www.env.gov.bc.ca/cdc

BC Species and Ecosystem Explorer (database for checking SAR status and relevant reports)
http://srmapps.gov.bc.ca/apps/eswp/search.do

Identified Wildlife Management Strategy Home Page
(Environmental Stewardship Division, Ministry of Environment)
http://www.env.gov.bc.ca/wld/identified/index.html
- to check Wildlife Habitat Area (WHA) status (approved or pending)
http://www.env.gov.bc.ca/cgi-bin/apps/faw/wharesult.cgi?search=show_approved

6.0 References Cited

British Columbia Ministry of Sustainable Resource Management. 2002. One fish, two fish, red fish, blue fish. Species ranking in British Columbia.

British Columbia Ministry of Water, Land and Air Protection. 2004. Accounts and Measures for Managing Identified Wildlife. Version 2004. Biodiversity Branch, Identified Wildlife Management Strategy, Victoria, B.C.

Appendix 1. Structural Stages and Modifiers (PEM variables from Standards for Terrestrial Ecosystem Mapping)

Structural Stage			
Code	**Structural Stage**		
1	Sparse/Bryoid		
2	Herb		
2d	Dwarf Shrub		
3	Shrub/Herb	3a	Low Shrub
3b	Tall Shrub	**Structural Stage Modifiers**	
4	Pole/Sapling	s	single-storied
5	Young Forest (generally 40-80 years but may begin as early as age 30, depending on tree species and ecological conditions.)	t	two-storied
6	Mature Forest (ESSFdk is Group A, 80-140 yrs).	m	multistoried
7	Old Forest (ESSFdk is Group A, >140 yrs).	i	irregular
		h	shelterwood

Notes:

SAR – Species At Risk

User's Manual

Version 1.0

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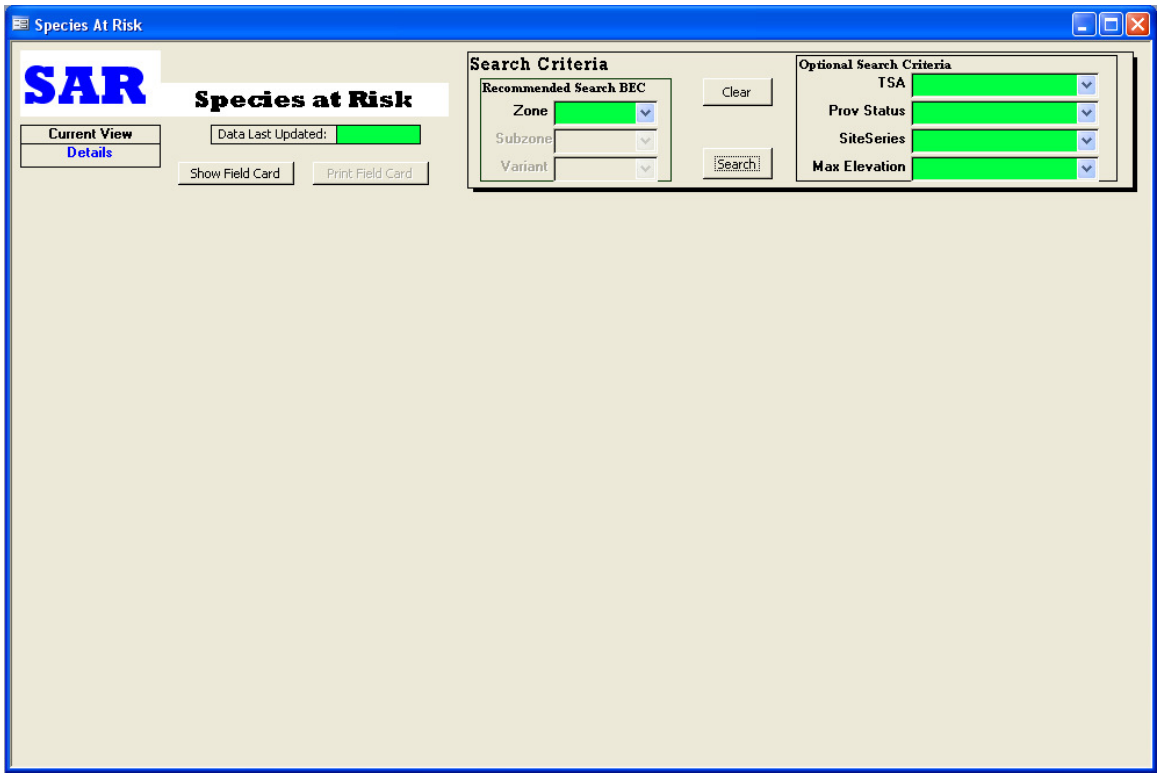
Overview

Cascadia Natural Resource Consultants (Cascadia) in cooperation with Tolko Industries Ltd. Heffley Creek division and Canfor have developed a Species at Risk (SAR) database application to assist licensees in the Fraser, Merritt and Okanagan TSA's make informed decisions regarding sensitive wildlife habitats and Species at Risk during strategic and operational planning exercises.

The application allows users to navigate through the custom SAR database and identify species at risk in by unique BEC zones and other criteria. Navigation results can be viewed in their entirety or as Field Card Reports of key SAR attributes for each BEC Variant in a TSA.

Cascadia Natural Resource Consultants have been identified as the initial data custodian for the SAR database and will be active in updating the SAR database annually for TSA users. To meet both of these needs the application is deployed two modes;

- Read only for the general user base and;
- Read / Write / Delete for the data custodian.



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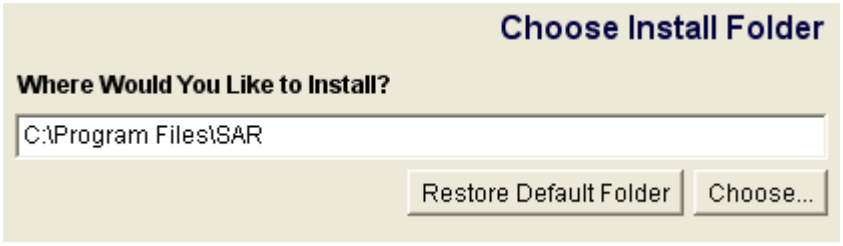
Installation

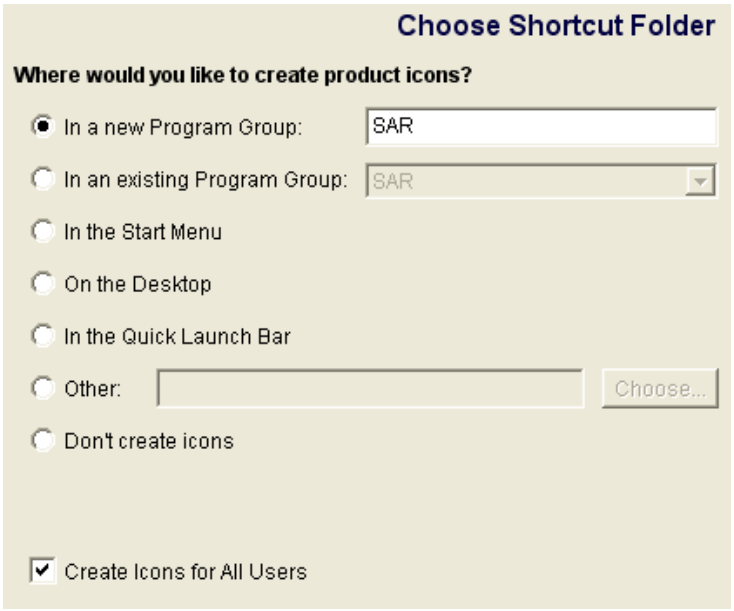
The SAR v1.0 data base application is delivered in an installation package called **SAR_Installer.exe** .
To install SAR v1.0:

1. Copy the SAR_Installer.exe file to a location on your local machine
2. Double click the SAR_Installer.exe and follow the prompts using the **Next** button Use the following settings for optimum installation.

   Install Location:



   Install Options:



System Requirements

Minimum Requirements:

- Operating System: Windows 2000 or better
- Applications: MSAccess 2000 or better

Replacing the MSAccess data store

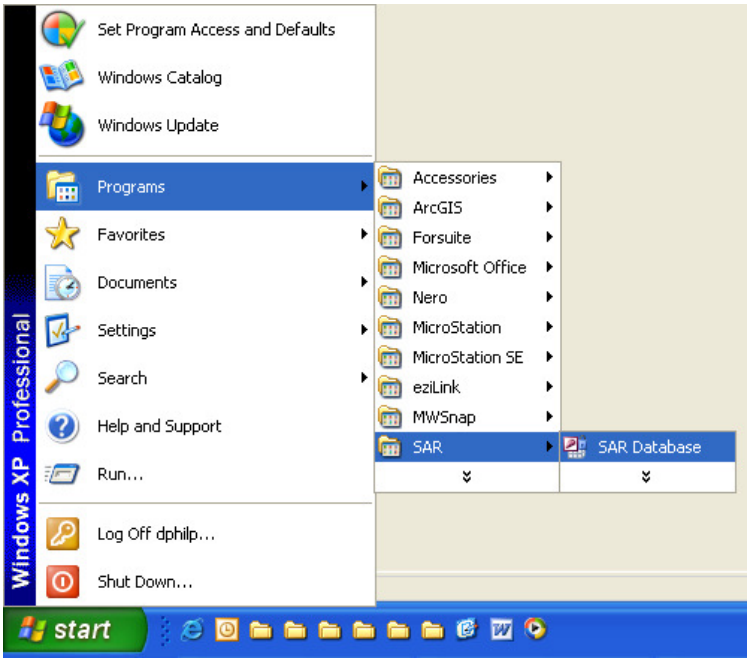
The initial install will load the v1.0 SAR data base to the same location the application was installed to. The database is called **SAR_be.mdb**
Periodically the data custodian will release an updated SAR database. To update your SAR database copy the new **SAR_be.mdb** to the location the application was installed to overwriting the previous database.
Note: Some users may want to archive the previous **SAR_be.mdb** database prior to replacing it with the new database.

SAR – Species At Risk

Launching SAR

To open the SAR database:

1. Select the Windows Start Menu Programs Group
2. Select the **SAR Database** from the SAR Program Group



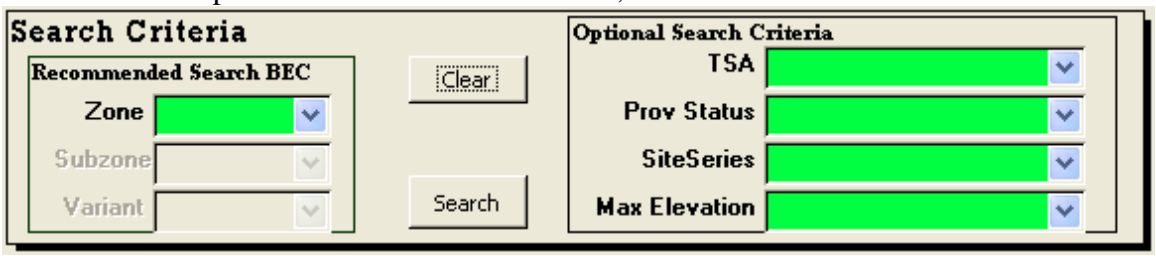
Navigation

Navigation in the SAR database is contained in a single navigation interface. The interface contains standard windows controls for drop down selection, window scrolling, minimize, maximize and close.

Searching the Database

Search Criteria

Searching for Species at Risk is achieved through primary and secondary or optional search criteria. The primary search criteria are BioGeoClimatic (BEC) zone, sub-zone and variant. The secondary search criteria are TSA, Species at Risk Provincial Status, Site Series and Maximum Elevation.



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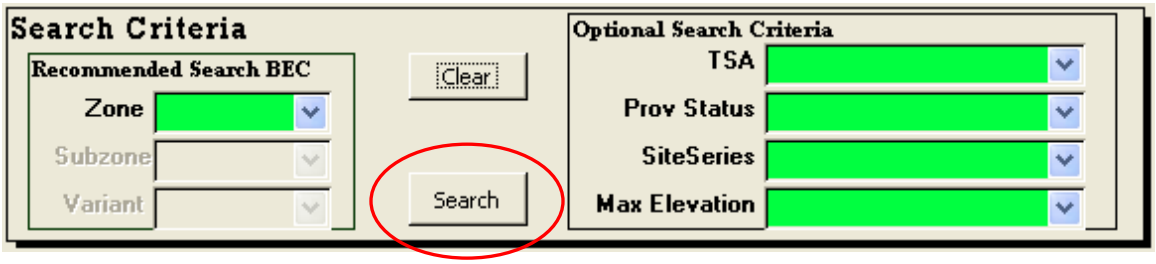
Note: The data base has been modeled to allow only valid BEC zone, sub-zone and variant combinations.

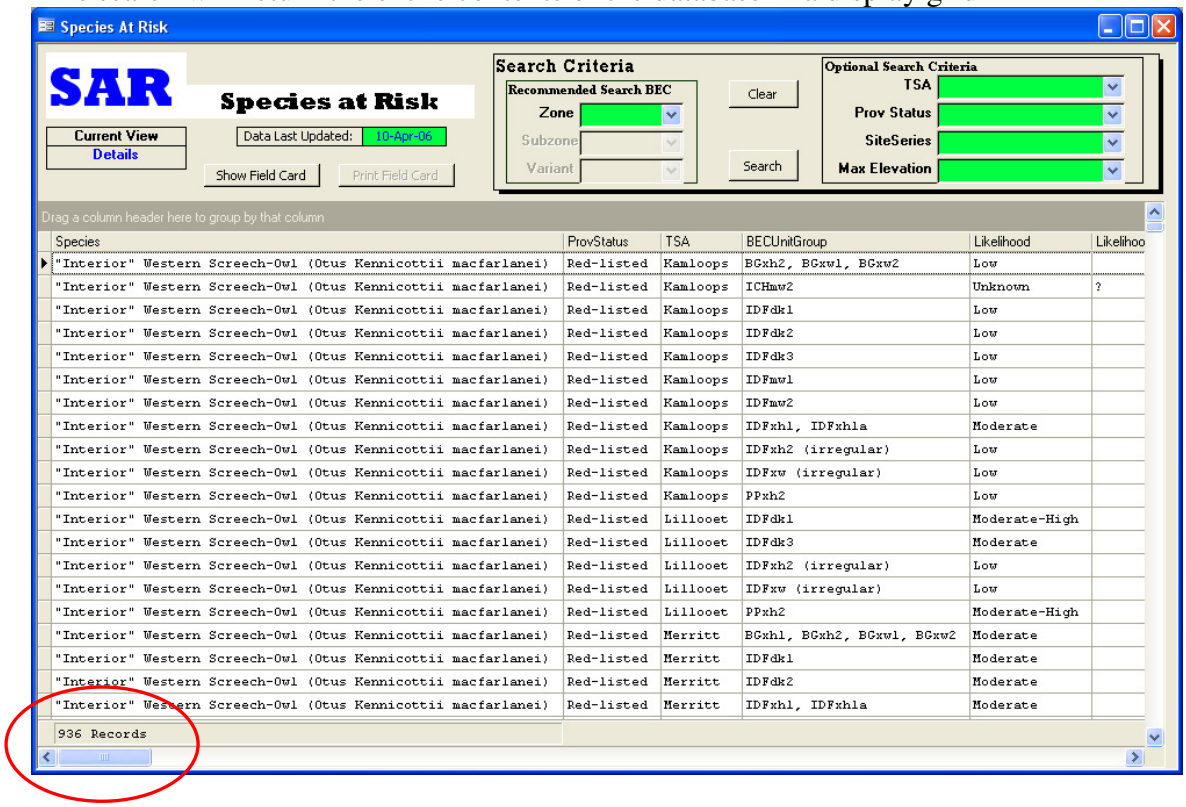
Retrieving all SAR Database Records

To Retrieve all SAR Records:

1. Select the **Search** button without selecting primary or optional search criteria



This search will return the entire contents of the database in a display grid

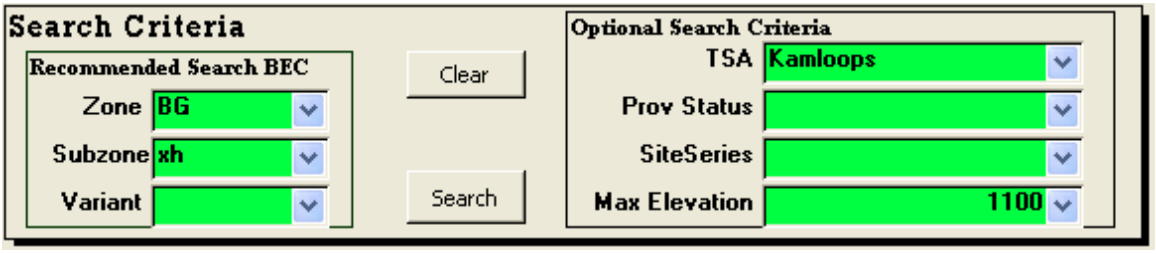

Species At Risk
SAR
Species at Risk
Current View
Details
Data Last Updated: 10-Apr-06
Show Field Card
Print Field Card
Search Criteria
Recommended Search BEC
Zone
Subzone
Variant
Clear
Search
Optional Search Criteria
TSA
Prov Status
SiteSeries
Max Elevation
Drag a column header here to group by that column
Species | ProvStatus | TSA | BECUnitGroup | Likelihood | Likelihoo
"Interior" Western Screech-Owl (Otus Kennicottii macfarlanei) | Red-listed | Kamloops | BGxh2, BGxw1, BGxw2 | Low
"Interior" Western Screech-Owl (Otus Kennicottii macfarlanei) | Red-listed | Kamloops | ICHmw2 | Unknown | ?
"Interior" Western Screech-Owl (Otus Kennicottii macfarlanei) | Red-listed | Kamloops | IDFdk1 | Low
"Interior" Western Screech-Owl (Otus Kennicottii macfarlanei) | Red-listed | Kamloops | IDFdk2 | Low
"Interior" Western Screech-Owl (Otus Kennicottii macfarlanei) | Red-listed | Kamloops | IDFdk3 | Low
"Interior" Western Screech-Owl (Otus Kennicottii macfarlanei) | Red-listed | Kamloops | IDFmw1 | Low
"Interior" Western Screech-Owl (Otus Kennicottii macfarlanei) | Red-listed | Kamloops | IDFmw2 | Low
"Interior" Western Screech-Owl (Otus Kennicottii macfarlanei) | Red-listed | Kamloops | IDFxh1, IDFxh1a | Moderate
"Interior" Western Screech-Owl (Otus Kennicottii macfarlanei) | Red-listed | Kamloops | IDFxh2 (irregular) | Low
"Interior" Western Screech-Owl (Otus Kennicottii macfarlanei) | Red-listed | Kamloops | IDFxw (irregular) | Low
"Interior" Western Screech-Owl (Otus Kennicottii macfarlanei) | Red-listed | Kamloops | PPxh2 | Low
"Interior" Western Screech-Owl (Otus Kennicottii macfarlanei) | Red-listed | Lillooet | IDFdk1 | Moderate-High
"Interior" Western Screech-Owl (Otus Kennicottii macfarlanei) | Red-listed | Lillooet | IDFdk3 | Moderate
"Interior" Western Screech-Owl (Otus Kennicottii macfarlanei) | Red-listed | Lillooet | IDFxh2 (irregular) | Low
"Interior" Western Screech-Owl (Otus Kennicottii macfarlanei) | Red-listed | Lillooet | IDFxw (irregular) | Low
"Interior" Western Screech-Owl (Otus Kennicottii macfarlanei) | Red-listed | Lillooet | PPxh2 | Moderate-High
"Interior" Western Screech-Owl (Otus Kennicottii macfarlanei) | Red-listed | Merritt | BGxh1, BGxh2, BGxw1, BGxw2 | Moderate
"Interior" Western Screech-Owl (Otus Kennicottii macfarlanei) | Red-listed | Merritt | IDFdk1 | Moderate
"Interior" Western Screech-Owl (Otus Kennicottii macfarlanei) | Red-listed | Merritt | IDFdk2 | Moderate
"Interior" Western Screech-Owl (Otus Kennicottii macfarlanei) | Red-listed | Merritt | IDFxh1, IDFxh1a | Moderate
936 Records

Note: The total number of records returned is displayed in the bottom left of the application window.

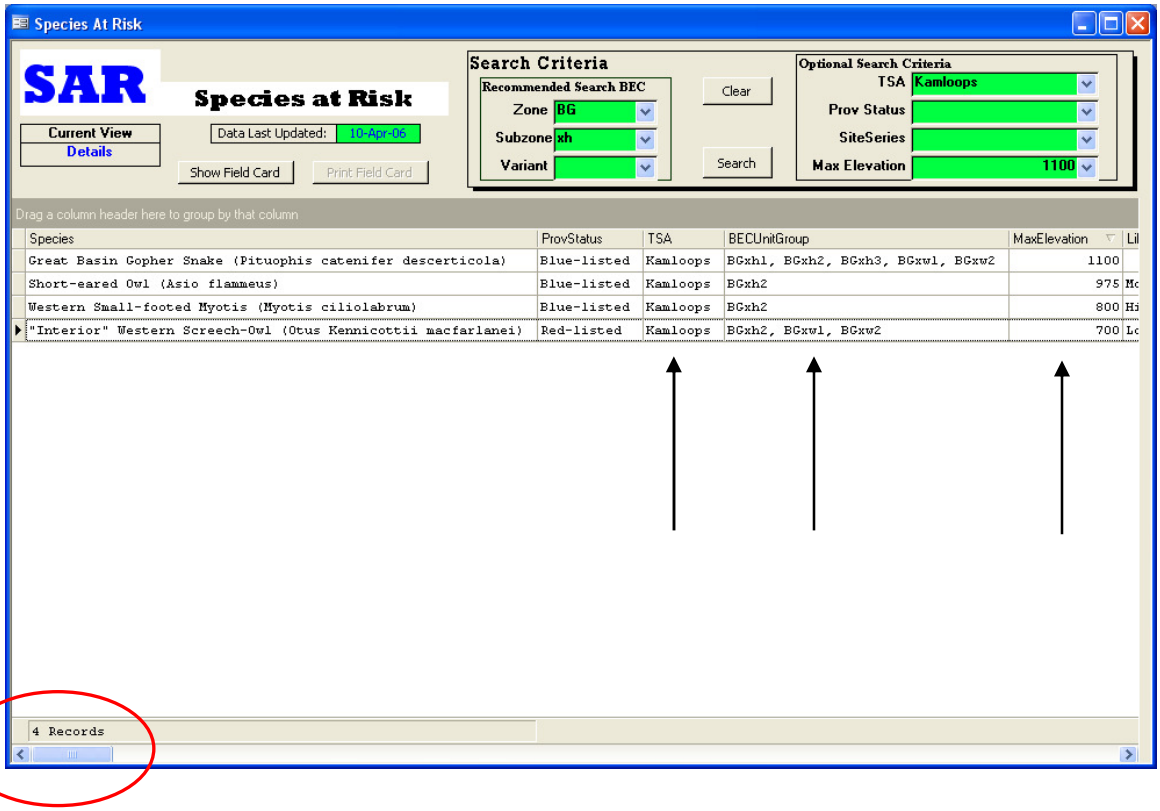
Retrieving Selected SAR Database Records by Search Criteria

To retrieve selected SAR Records:

1. Select the desired Search Criteria using the dropdowns for Recommended Search BEC and Optional Search. Any combination of criteria can be used.



2. Select the **Search** button. Results will be displayed in the display grid.


Species At Risk
SAR
Species at Risk
Current View
Details
Data Last Updated: 10-Apr-06
Show Field Card
Print Field Card
Search Criteria
Recommended Search BEC
Zone BG
Subzone xh
Variant
Clear
Search
Optional Search Criteria
TSA Kamloops
Prov Status
SiteSeries
Max Elevation 1100
Drag a column header here to group by that column
Species | ProvStatus | TSA | BECUnitGroup | MaxElevation
Great Basin Gopher Snake (Pituophis catenifer descerticola) | Blue-listed | Kamloops | BGxh1, BGxh2, BGxh3, BGxw1, BGxw2 | 1100
Short-eared Owl (Asio flammeus) | Blue-listed | Kamloops | BGxh2 | 975
Western Small-footed Myotis (Myotis ciliolabrum) | Blue-listed | Kamloops | BGxh2 | 800
"Interior" Western Screech-Owl (Otus Kennicottii macfarlanei) | Red-listed | Kamloops | BGxh2, BGxw1, BGxw2 | 700
4 Records

In the example above 4 records were returned meeting the selected criteria.
Note that the returned records include BEC zone and sub-zone as per the criteria. All variants were returned as well as there was no variant specified in the search.

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Clearing a Search

To clear a search:

1. Select the **Clear** button located on the Search Criteria panel.

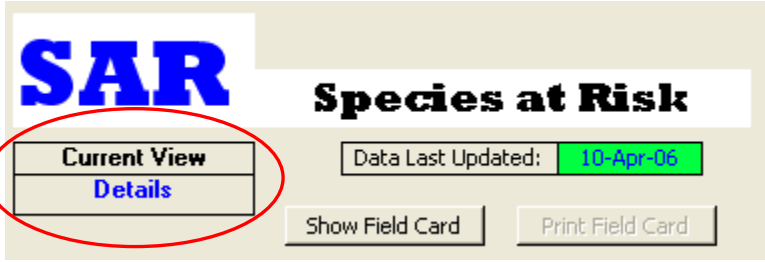
Data Views

Current View

The SAR data base applications can display database records in 2 modes;

- Details
- Field Card

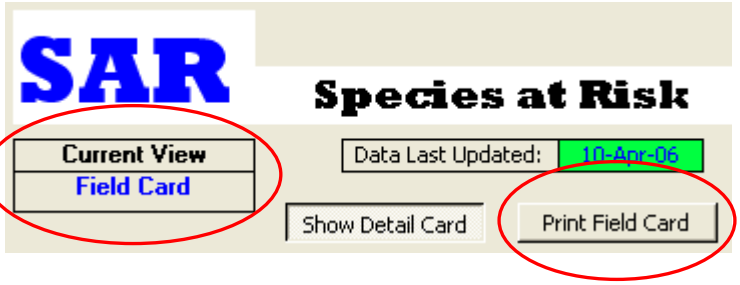
The Details view displays all data columns for records displayed in current view. The SAR Field card view is a specific subset of the SAR database columns implemented to assist planners and biologists in the field.



The Details view is the default display mode.
To switch to Field Card view:

1. Select **Show Field Card**
   the Current View display will change to Field Card. Note that the Print Field Card Button becomes active.

Note: If a record in the grid has been selected prior to selecting Show Field Card, only the selected record will display in Field Card View.



To switch to Details view:

2. Select **Show Field Card**
   the Current View display will change back to Details.

Note: Clearing the search and re-querying the SAR records will reset the current view to Details.

Printing Field Card Reports

The Field Card view can be printed to a formatted report containing a single or multiple SAR record sets.
To print a single SAR record set:

1. Use the **Search** functionality to locate SAR records of interest
2. Use your left mouse button to select the record to print. The record can be selected anywhere in the grid
3. Select **Show Field Card** to switch to Field Card View
   The Current View display will change to Field Card and only the selected record will display.
4. Select **Print Field Card**
   See Appendix A for sample Field Card report

Display Grid Properties

The Display Grid has three distinct properties for altering the data view

- Ascending Sort
- Column Order
- Drag and Drop Grouping

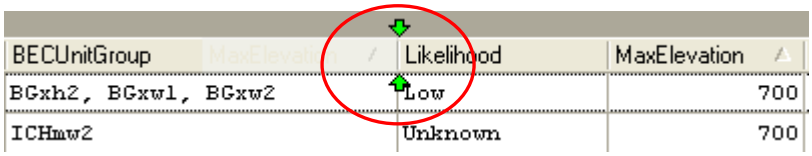
Ascending Sort

Each column can be sorted in an ascending alphabetical or numeric order. Only one column can be sorted. Sorts cannot be combined across columns
To sort a column:

1. Use your left mouse button and single click a column header.

Column Order

Column order can be modified by simply selecting the column header and moving it to a new location in the grid.
In the example below MaxElevation is currently selected for repositioning in the Grid. As your cursor drags the column header across the header portion of the grid yellow arrows appear at each location that will accept the column header placement.



BECUnitGroup	Likelihood	MaxElevation
BGxh2, BGxw1, BGxw2	Low	700
ICHmw2	Unknown	700

MaxElevation has been successfully moved to a new position in the grid

BECUnitGroup	MaxElevation	Likelihood
BGxh2, BGxw1, BGxw2	700	Low
ICHmw2	700	Unknown

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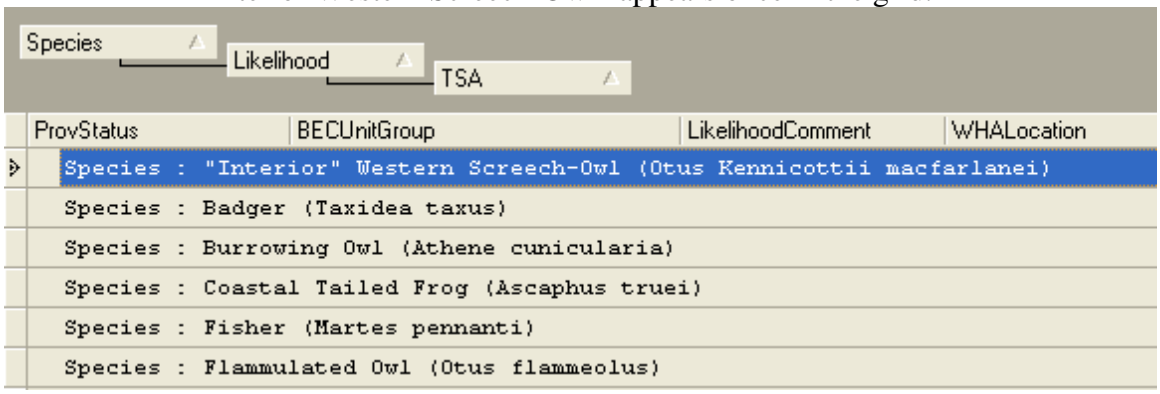
To reposition a column in the grid:

1. Use your left mouse button to select the column header to move
2. Drag the column header to the new location as indicated by the yellow placement arrows
3. Release the mouse button

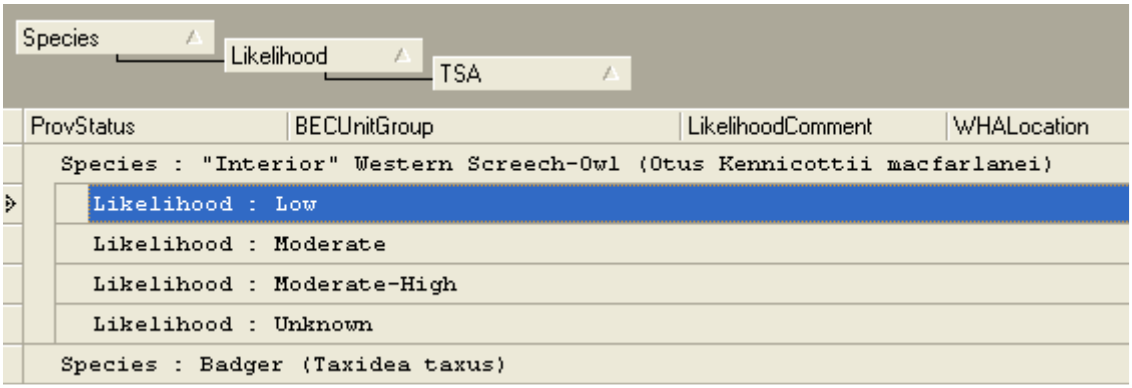
Note: Clearing the search and re-querying the SAR records will reset the column order to the default order.

Drag and Drop Grouping

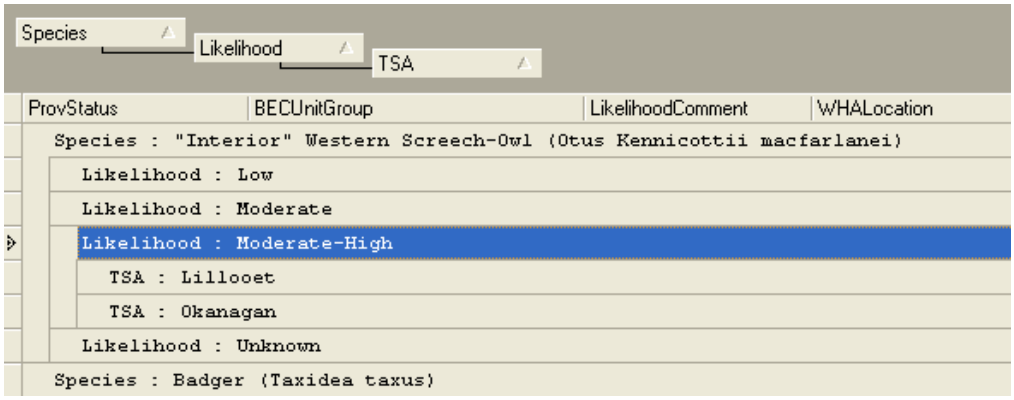
Drag and Drop Grouping allows the data grid to be arranged in a summarized, hierarchical tree structure. This is an extremely powerful data viewing function that allows any data element in the SAR data base to become the focus or primary data element in view.
In the example below the Species, Likelihood and TSA have been grouped. This alters the grid view summarizing the columns. The species, "Interior Western Screech-Owl" appears once in the grid.



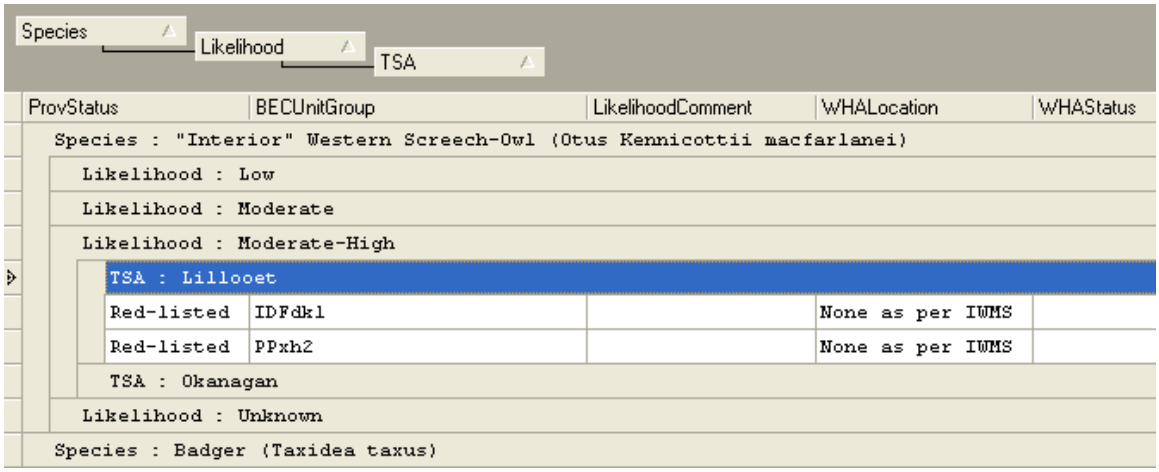
Double clicking a single species reveals the next group item, Likelihood. In this example there are four likelihood categories available indicating the there at least four distinct "Interior Western Screech-Owl" records in the SAR database.



Double clicking a likelihood indicator drills down further and reveals that the “Interior Western Screech-Owl” has a likelihood of being present in both the Fraser and the Okanagan TSA.

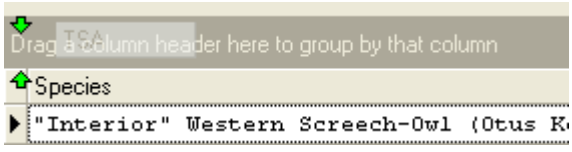


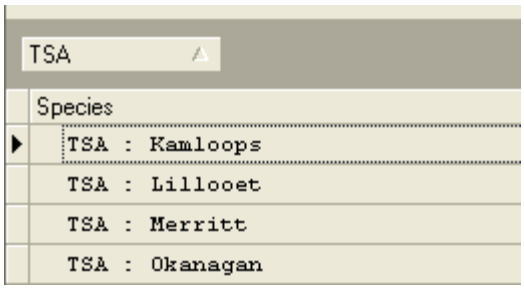
The lowest level of the example grouping is TSA. Double clicking a TSA indicator reveals all remaining columns not included in the grouping.



There is no limitation to the number or order of columns in the group.
To create a Data Group:

1. Use your left mouse button to select the column header to group
2. Drag the column header to the drag an drop location in the grid





3. Release the mouse button
4. Repeat for the desired columns

Note: Clearing the search and re-querying the SAR records will remove the Data Group and reset the grid order to the default order.

Database Version

Date last Updated

The Date Last Updated displays the last SAR Database edit date. Periodically the data custodian will release an updated SAR database. Once the update database has replaced the previous database the new date of the last database update will be displayed.

Appendix A. Field Card Report Example

SAR **Species at Risk** **FIELD CARD**

BEC Unit Group	IDFdk1

Site series	Lead species	Single tree retention size
Hygric, mesic, sub-hygric, sub-mesic	Act, At, Fd	> 30 cm dbh; with cavities if possible
Critical aspect 1	**Co-dominant species**	**Buffer area around single tree**
N/A, Unknown	Act, At, Fd	5-12ha
Critical aspect 2	**Sub-dominant species**	**Patch retention size**
N/A, Unknown	Act, At, Fd	>2.5ha
Slope range	**Crown closure**	**Stand structure for retention**
Unknown		Local riparian forest structure, retain open woodland structure in adjacent upland
Key microsite topo features	**Clear cut or partial cut**	**Stand density for retention**
	Patch cut??	Existing riparian forest density
Structural stage	**Wildlife tree class (Ref: Biodiversity Guidebook)**	**Key stand features for retention**
6-7	2-6; particularly with cavities	Large diameter trees in riparian forest, including Act, At, Ew and mixed conif-decid
Age class	**Single tree retention species**	**Patch species retention**
5-9	Act, At, Ew, Fd, Lw, Py	Act, At, Ew, Fd, Lw, Py

Additional Management Considerations
Consider nesting requirements of Pileated and Northern Flickers since woodpecker holes are most commonly used for roosting; most occupied territories have at least 2 cavities (nesting & roosting)

Species	"Interior" Western Screech-Owl (Otus Kennicottii macfarlanei)

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